

## CASE STUDY

# All Hands On Deck: A-Gas Rapid Recovery Completes Cruise Ship Recovery Job



## BACKGROUND

### About Princess Cruises

Princess Cruises is one of the largest cruise lines in the world, carrying over a million passengers annually across the globe. They are dedicated to environmental practices that set a high standard for excellence and responsibility, helping to preserve the marine environment. Through their holistic environmental program, *Planet Princess*, Princess Cruises encourages and inspires crew members and guests to be good stewards of the environment.

### About Inter-Marine

Inter-Marine is an Australian business specializing in heavy marine technical services, including the service, maintenance, and installation of maritime HVAC systems.

### About A-Gas

A-Gas is building a sustainable future through the supply of lower global warming refrigerants combined with responsible lifecycle management of refrigerant gases. Through our first-class recovery, reclamation, and repurposing processes, we capture refrigerants and fire protection gases for future re-use or safe destruction, preventing harmful release into the atmosphere.

### Rapid Recovery®

Rapid Recovery is A-Gas' premier refrigerant recovery service. Across the globe, we provide a safe and fast on-site recovery service, which includes industry-leading EPA documentation and refrigerant analysis.

## CHALLENGE

Inter-Marine contacted A-Gas on a recommendation from Airefrig, an A-Gas customer in Australia and Inter-Marine vendor, to assist with a routine HVAC maintenance project on the *Grand Princess*, one of Princess Cruises' premiere vessels. Because Princess Cruises is committed to protecting and conserving the environment, their team required responsible refrigerant recovery from the chiller systems on board the over 107,500-ton vessel,

## AT A GLANCE

### Challenges

- Routine maintenance of a vessel's HVAC system
- Avoid disruption to more than 3,600 guests and crew onboard
- Minimize any idle time at port for maintenance

### Benefits

- Environmental: Safe recovery of R22 and R422D, preventing potential release of refrigerant to the atmosphere
- Economic: Eliminated potential costs of a ship sitting idle in port; avoided disruption to guests and crew
- Other: Reliable partner dedicated to customer-focused problem solving

preventing any potential release of refrigerant to the atmosphere.

The Grand Princess was set to be off the coast of Northern California for a few days, where Inter-Marine was contracted to begin the routine HVAC maintenance. Thanks to advanced planning from Inter-Marine and Princess Cruises, and A-Gas' global footprint, the A-Gas team in Australia called on our Rapid Recovery team in Northern California, as they could easily service the Grand Princess.

## SOLUTION

With a focus on exceptional guest services, avoiding passenger disruptions was crucial, as such, all backup systems were installed and working so there would not be any disruption to the 3,600 guests and crew. But it was also important to avoid idle time at the port, which can cost a fortune both in port fees and lost time at sea. Because Rapid Recovery has specialized mobile refrigerant recovery equipment, the team could load their equipment onto the ship before it left port. Advanced planning and partnership between Princess Cruises, Inter-Marine, and A-Gas made this all possible.



## RESULTS

After three days at sea recovering refrigerant, our Rapid Recovery team recovered 2,100 pounds of R22 and 4,100 pounds of R422D—all completed within the confines of a working vessel at sea! Once the ship returned to port, the Rapid Recovery team unloaded all of their equipment and the recovered refrigerant. Due to our proprietary mobile equipment, the El Machino, the recovery took significantly less time than it would have taken with off-the-shelf equipment.

## CONCLUSION

The recovered refrigerant from the Grand Princess has been reclaimed to AHRI 700 standard and US EPA regulations, enabling its re-entry into the market for reuse. Through the complete recovery and reclamation of existing refrigerants, emissions to atmosphere have been minimized and less virgin refrigerant is required to be manufactured, an all-around win-win situation. Furthermore, the Grand Princess exemplified the *Planet Princess* program, proving Princess Cruises' commitment to protecting and conserving the environment.



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2,100 pounds of R22 recovered and reclaimed.  
4,100 pounds of R422D recovered and reclaimed.